

**AGREEMENT BETWEEN GEA ENGINEERING, P.C.
AND CLIENT FOR PROFESSIONAL SERVICES**

THIS AGREEMENT made this 17th day of April in the year 2013 by and between City of Kingston (hereinafter referred to as "Client"), and GEA Engineering, P.C. (hereinafter referred to as "GEA").

WHEREAS, the Client intends to engage GEA to perform certain professional services for a project known as Washington Avenue Tunnel Appurtenances (Hereinafter referred to as "the Project") as described in Attachment A, Scope of Work;

NOW, THEREFORE, the Client and GEA do hereby agree as follows:

ARTICLE 1-SCOPE OF SERVICES. GEA shall provide professional services for the Project as outlined below (Scope of Services), and as per Attachment A, in accordance with the terms and conditions of this Agreement.

SCOPE OF SERVICES

Reference is made to the RFP documents and provisions of the EDA Grant.

PROJECT UNDERSTANDING

The City of Kingston needs an expert Consulting Engineering Team to provide services for survey, design and construction administration of three related project components:

- Stabilization of the Tannery Shaft Tunnel
- Replacement of Tannery Brook Channel with stormwater conveyance piping
- Restoration of surfaces at Washington Avenue and Tannery Brook

Critical to the success of this project is the long term stability of the subsurface soils along the tunnel alignment and the need to prevent continued subsidence. That is why GEA has brought in national experts in solving geotechnical and tunnel problems, the renowned firm of Mueser Rutledge Consulting Engineers (MRCE). While emergency engineering services have been initiated to address the problems, only experts with the breadth of experience of Mueser Rutledge can provide the level of comfort needed to protect the health and safety of Kingston's citizens.

1.0 TUNNEL INVESTIGATION AND REPAIR

Performance problems associated with a 100 year old brick arch tunnel below Washington Avenue in the city of Kingston, NY, will be separated into two related areas of concern. First, deterioration of the brick arch tunnel has allowed sediment laden groundwater to enter. Second, ground loss above the tunnel caused subsidence of the overburden and created sinkholes at the surface, damaging buried utilities and rendering Washington Avenue unsafe for traffic.

MRCE will conduct a thorough review of available subsurface and construction history information, and conduct a subsurface investigation to augment the available information (if needed) in order to efficiently define those areas in need of remedial work. MRCE will develop and present several alternatives for permanent remedy of the performance problems.

MRCE will prepare a cost estimate for each alternative and assess the performance and safety risks. Cost estimates will be developed by speaking to contractors for specialty items such as jet grouting and chemical grouting.

MRCE will consider methods for real-time monitoring of the existing tunnel during remedial construction in order to detect and manage construction disturbance.

Based on our understanding of the tunnel and performance problems, permanent remedy alternatives may include a combination of the following:

1. Dewatering

- Control groundwater infiltration to the tunnel by dewatering to reduce hydrostatic pressure. Dewatering can be used for temporary benefit during tunnel repair work or grouting.
- Determine feasibility of permanent dewatering to inhibit ground loss and reduce loads on the tunnel brick arch or insert liners.

2. Jet Grout Arch

- Use jet grouting method to create a monolithic structural soil-cement block above the tunnel to close flow pathways for groundwater and sediment, and transfer overburden soil load away from the brick arch liner.
- Extend jet grout columns vertically adjacent to the tunnel to transfer overburden load below the invert and seal against lateral groundwater flow.
- Potential to offer a lower, cost effective solution compared to the current plan being considered; \$300,000 verses \$600,000.

3. Grout Seal Shaft Penetration

Use chemical or pressure grouting methods to seal shaft penetration at the bedrock surface and at the top of the brick arch structure.

4. Replace Tunnel Segment

Construct a braced excavation to remove and replace the damaged segment of tunnel and shaft with new structures.

5. Overburden Densification

- Implement compaction grouting where borings or cone penetrometers identify interconnected voids or loosened soil pockets.
- Utilize vibrating pile densification to remedy large areas of loose soil.

6. Reinforced Subgrade

Construct a reinforced soil or reinforced concrete mat below Washington Avenue subgrade to reduce potential for surface effects caused by unidentified voids or loose soil zones in the deep soil profile.

REMEDY DESIGN

- 1.Provide detailed design for selected permanent remedy approach, including design drawings, specifications, construction sequence and cost estimate.
- 2.Design an instrumentation and monitoring plan to detect possible disturbance to the existing tunnel during constructions. Develop vibration action levels and notification plan to modify construction activities in a timely manner.

REMEDY INSPECTION

- 1.Provide field inspection of selected permanent remedy work.
- 2.Implement the monitoring and notification plan during construction.
- 3.Provide design drawings and specifications for reconstruction of near-surface subgrade to reduce the potential for continued ground surface subsidence.

2.0 STORMWATER CONVEYANCE PIPING OF TANNERY BROOK

GEA proposes to utilize the following software to conduct the hydrologic and hydraulic analyses and produce the required models and plans.

- Drainage analysis – HydroCad (TR-55, TR-20) watershed modeling to provide NYSDEC accepted hydrology, and HEC-RAS to provide the hydraulic modeling to demonstrate reduction of flooding. The 25 yr, 50 yr and 100 yr design storms will be modeled. GEA will generate the runoff of stormwater from the tributary area of Tannery Brook.
- AutoCAD Civil 3-D – AutoCAD Civil 3-D will be utilized to produce the design drawings, plans, profiles and sections and designs.

SURVEYS

GEA will engage Brooks & Brooks (WBE) surveyors to provide the surveying for the project.

1. Topographic and physical features survey areas approximately 400' x 400' at Washington Avenue and Donovan Place (area of depression).

Include:

- Top and bottom of curb on Washington Avenue
- Sidewalks in front of houses
- Driveways in front of houses
- Poles, hydraulics, signs in ROW
- Culvert
- Manholes and chamber covers
- Water and sewer lines

2. Topographic surveys along Tannery Brook (850 LF±) including culverts from Washington Avenue to Conway Place to 50 ft behind garage. Distance of 850 LF±. Include top and bottom of curb and street elevations. Sections 40 ft± width of survey = 40 ft. Shoot: channel thailweg, top of bank and bottom of bank (L&R). Locate trees and structures within 40' ROW.

3. Prepare easements 15-20ft width for item 2 and five properties for item 1.

4. Establish baseline control with benchmarks.

WATERSHED MAP

GEA will delineate the project watershed map based on all available topographic and site information including the records searches from the various agencies. This watershed map will be initially developed using Ulster County topography supplemented by local available elevation data from GEA's survey, available maps and drawings and will be presented on a 24" x 36" drawing.

HYDROLOGIC STUDY

The 25 year, 50 year and 100 year Tannery Brook flows will be estimated. GEA will run the HydroCad model to provide flows for design storms from the watershed.

GEA will run the HEC-RAS models using various pipe diameters starting with 4 ft dia. and increasing in diameter and flow area, considering the need for arch pipe to maintain depth of cover and profile. The HEC-RAS model will indicate water surface elevations contained within the system for different storm flow events and pipe diameters.

Kingston officials will select the size of pipe needed based on estimated costs provided, budget and projected flooding reduction.

3.0 RESTORATION OF SURFACES

GEA will survey affected areas along with Brooks & Brooks, and assess the repairs needed for restoration. These will include: repairs to driveways, curbs, sidewalks, stairs and other areas subjected to subsidence.

ENGINEERING PLANS

GEA will prepare detailed construction plans for the proposed work. The plans will be prepared on 24" x 36" sheets. The work will generally be presented in the order, manner and detail specified by the City and EDA.

Each item of work on the plans shall be identified with item number corresponding to those in the Standard Specification based on NYSDOT specifications. Special specifications shall be provided for all work items not covered by the Standard Specifications. GEA will provide a computer generated list of bid items with item numbers and estimated quantities. The list will be generated with Microsoft Excel and a CD disk containing this data shall be provided.

PRODUCTS

Final construction documents (drawings & specifications). Updated detailed construction estimate.

BIDDING AND CONSTRUCTION PERIOD SERVICES

GEA and MRCE will provide shop drawing reviews and construction period services including inspections and project tracking during construction.

Note: During the progress of the work under 1.0 – Tunnel Investigation and Repair, MRCE will review all documentation and determine if additional subsurface information is needed to assess conditions to provide a complete assessment.

SPECIAL PROJECT REQUIREMENTS

GEA will retain Women and Minority sub-consultants where appropriate. GEA will make a good faith effort to meet the project goal of 6.9 percent for participation of women, as well as the goal for minority participation of 17 percent.

Historic properties shall be protected; the New York State Office of Parks, Recreation, and Historic Preservation (Kenneth Markunas, 518-237-8643 ext. 3273) shall be engaged where alteration to structures or excavation of intact soils is contemplated.

The summary of EDA Construction Standards is made a part of this Agreement for Engineering Services by attachment.

GEA will attempt, to the greatest extent practicable, to purchase and specify American-made equipment and products with funding provided under this award (BUY AMERICAN CLAUSE).

GEA will comply with all federal (Davis-Bacon) and state wage rates.

ARTICLE 2-CHANGES IN THE WORK. The Client and GEA may make additions to the Scope of Services by mutual agreement. The Client may omit work previously ordered by written instructions to GEA. The provisions of this Agreement, with appropriate changes in GEA's compensation and project schedule, shall apply to all additions and omissions.

ARTICLE 3-RESPONSIBILITIES OF THE CLIENT. The Client will:

3.1 Provide all criteria and full information as to its requirements for the project.

3.2 Upon identification by GEA and approval by the Client of the necessity and scope of information required, furnish GEA with data, reports, surveys, and other materials and

information required for this Project, except those included in GEA's scope of services.

3.3 Acquire all land and rights-of-way as required for this Project.

3.4 Provide access to the project site and make all provisions for GEA to enter upon public and private lands as required for GEA to perform its services under this Agreement.

3.5 Examine all studies, reports, sketches, opinions of the construction costs, specifications, drawings, proposals and other documents presented by GEA to the Client, and promptly render in writing the Client's decisions pertaining thereto within a week, or, if a longer time is needed, within a period mutually agreed upon.

3.6 Give prompt written notice to GEA whenever the Client observes or otherwise becomes aware of any defect in the Project.

3.7 Furnish to GEA, prior to execution of this Agreement, a copy of any design and construction standards the Client shall require GEA to follow in performing its services under this Agreement.

ARTICLE 4-PROJECT SCHEDULE. GEA is prepared to begin work within three (3) calendar days of Client's authorization to proceed. GEA will adhere to the established Grant Administration Plan milestones, as follows:

Start of Design Activities

5/13

Milestone/ Activity	Grouting	Brook	Street Restoration
Completion of Final Plans and Specifications	6/13	9/13	7/13
Date All Permits will be obtained	6/13	9/13	7/13
Advertisement for Bids	7/13	10/13	8/13
Bid Opening	8/13	11/13	9/13
Construction Contract Award	8/13	11/13	9/13
Pre-Construction Conference	8/13	11/13	9/13
Issuance of Notice-to-Proceed	9/13	11/13	10/13
Substantial Completion Date	10/13	11/14	12/13
Final Completion Date/Acceptance by Owner	10/13	12/14	12/13

We understand that these schedules are goals and that the area of work labeled "Grouting" may require additional time based on investigation to be conducted as part of GEA/MRCE services.

ARTICLE 5-COMPENSATION. For the services as outlined in Attachment A, Scope of Services, GEA shall be compensated in accordance with Article 5.1. Any work added to the Scope of Services under Article 2 shall be compensated at GEA's standard rates in effect at the time of performance, unless otherwise agreed.

5.1 GEA will be compensated for time and expenses in accordance with Exhibit 1, Fee Proposal, plus additional fees for further soil investigations or other additional services as required, in the amount of \$50,000 for a maximum upset limit of \$ 194,617.00 ;

ARTICLE 6-PAYMENT. Payment for services rendered by GEA shall be in accordance with the following:

6.1 Invoices will be submitted by GEA every month and will indicate:

X (a) if a time-and-expenses contract, the time and expenses incurred during the period.

6.2 Payments for invoices prepared by GEA are due and payable within 45 days of the invoice date.

6.3 Payments due GEA under this Agreement shall be subject to a service charge of one and one-half (1-1/2) percent per month for invoices not paid within forty-five (45) days of the invoice date.

6.4 If the Client does not make timely payments to GEA, GEA may suspend its services on the basis of non-performance on the part of the Client. When such progress payments are restored, GEA will continue its services.

ARTICLE 7-INSURANCE. GEA shall, during the performance of the Agreement, keep in force all insurance coverages as listed below.

GEA shall procure and maintain at his own expense and without expense to the City, insurance for liability for damages imposed by law, of the kinds and amounts hereinafter provided, in insurance companies authorized to do business in the State of New York covering all operations under the contract whether performed by the successful Engineer or his subcontractors. Before the inception of this contract, GEA shall furnish to the City a Certificate of Insurance form(s) satisfactory to the City exhibiting compliance with this paragraph and providing that the policies shall not be changed or canceled until thirty (30) days written notice has been given to the City.

The types and limits of insurance shall be as follows:

- a) Workers Compensation as required by Law (submit Form C-105.2)
 - GEA – statutory
 - MRCE – statutory
- b) Disability Benefits as required by Law (submit Form DB-120.1)
 - GEA – statutory
 - MRCE - statutory
- c) Bodily Injury Liability
 - GEA - \$2 mil. Combined limit; \$1 mil umbrella
 - MRCE - \$1 mil. Combined limit; \$10 mil. umbrella
- d) Property Damage Liability
 - GEA - \$2 mil. Occurrence; \$4 mil. Aggregate; \$1 mil. Umbrella
 - MRCE - \$1 mil. Occurrence; \$2 mil. Aggregate; \$10 mil. umbrella
- e) Automobile Liability
 - GEA - \$2,000,000.00
 - MRCE - \$1,000,000.00
- f) Professional Liability
 - GEA - \$1,000,000.00 per claim
 - MRCE - \$2,000,000.00 per claim
 - GEA - \$2,000,000.00 aggregate
 - MRCE - \$2,000,000.00 aggregate

ARTICLE 8-LIMITATION OF LIABILITY. This Article 8 states the agreement of the parties with respect to allocation of the risks inherent in this type of project. The parties agree to limit GEA's liability in accordance with the following:

As GEA's services involve design services for construction at the site, Client agrees that GEA will be engaged for Construction Monitoring Services and the Client will be covered by GEA's Professional Liability Insurance then in effect. If the Client decides not to engage GEA to conduct Construction Monitoring services for a duration appropriate to the construction work as required by GEA, then GEA's Liability shall be limited to the lesser of: the total fees earned or \$10,000, whichever is less.

ARTICLE 9-INDEMNIFICATION.

9.1 Except, and to the extent provided in Article 8 above, GEA shall indemnify and hold harmless the Client from and against any liabilities, claims, and causes of action which the Client may suffer as a result of negligent acts, negligent errors, negligent omissions, or the willful or reckless disregard of obligations under this Agreement on the part of GEA or GEA's agents, employees or subcontractors in the performance of this Agreement, excepting such liability as may arise out of Client's negligence or willful or reckless disregard of Client's obligations under this Agreement.

ARTICLE 10-GENERAL CONSIDERATIONS.

10.1 GEA will prepare its drawings, specifications, and reports in a timely manner, but it is agreed between the parties to this Agreement that GEA cannot be responsible for delays occasioned by factors beyond its control, nor by factors which could not reasonably have been foreseen at the time this Agreement was prepared and executed.

10.2 GEA shall prepare drawings, specifications, and reports in accordance with engineering, planning, and architectural practices generally accepted at the time services are rendered. GEA makes no other warranty, either expressed or implied, as part of this Agreement.

10.3 GEA shall not disclose, or permit disclosure of any information designated by the Client as confidential, except to its employees and other consultants who need such information in order to properly execute the services of this Agreement.

10.4 Where applicable, statements concerning probable construction cost and detailed cost estimates prepared by GEA represent the judgment of professionals familiar with the construction industry. It is recognized, however, that neither GEA nor the Client has any control over the cost of labor, materials, or equipment, over the contractor's methods of determining bid prices, or over competitive bidding or market conditions. Accordingly, GEA cannot and does not guarantee that bids will not vary from any statement of probable construction cost or other cost estimate prepared by GEA.

10.5 Any drawings and specifications developed pursuant to this Agreement are instruments of service, and as such the original documents, tracings, and field notes are and remain the property of GEA.

10.6 If applicable (i.e., if construction at the site is to be performed by entities other than GEA or GEA's subcontractors), Client agrees to require the construction contractor to assume sole and complete responsibility for job site conditions during the course of construction of the project, including safety of all persons and property during non-working, as well as working hours. Client shall defend, indemnify, and hold GEA harmless from any and all liability or alleged liability in connection with the performance of the construction work by entities other than GEA or GEA's subcontractors on this project, except liability arising from the sole negligence of GEA.

10.7 To the extent provided in Attachment A, GEA will be available for advice and consultation, and will monitor on a limited basis the construction phase of the contract. However, unless the Attachment A, Scope of Services, provides explicitly for GEA to assume construction management services, GEA accepts no responsibility and in no way warrants that the construction work performed by entities other than GEA or GEA's subcontractors meets the design specifications, this being the sole responsibility of the Client.

10.8 At no time shall title to hazardous substances, solid wastes, petroleum contaminated

or other regulated substances pass to GEA, nor shall any provision of this Agreement be interpreted to permit GEA to assume the status of a "generator," "transporter," or "treatment, storage or disposal facility" under state or federal law.

10.9 In the event that legal action is instituted by either party to enforce the terms and conditions of this Agreement, the party which does not prevail agrees to pay the legal expenses, including attorney's fees, of the prevailing party.

ARTICLE 11-TERMINATION OF AGREEMENT. This Agreement may be terminated by either party upon thirty (30) days written notice to the other party without cause; by mutual written agreement of the parties; or by either party upon five (5) days written notice to the other in the event of continuing substantial failure to perform in accordance with the terms hereof by the other party through no fault of the terminating party. If this Agreement is terminated, GEA shall be paid for the extent of services performed by GEA to the effective date of termination. The indemnities of Article 9 and Article 10 shall survive any termination of this Agreement.

ARTICLE 12-DELEGATION OF DUTIES; SUCCESSORS. Neither party shall delegate its duties under this Agreement without the written consent of the other party. Each party binds itself to the successors, administrators and assigns of the other party in respect to all covenants of this Agreement.

ARTICLE 13-EXTENT OF AGREEMENT. This agreement represents the entire and integrated agreement between the Client and GEA and supersedes all prior negotiations, representations, or agreements, either written or oral, for this Project.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized representatives as of the day and year first written above.

CLIENT:

GEA ENGINEERING, P.C.:

SIGN: Shayne R. Goller SIGN: Steven M. Gamelsky

NAME: SHAYNE R. GOLLER NAME: Steven M. Gamelsky

TITLE: Mayor TITLE: President

ATTACHMENT A

SCOPE OF SERVICES

Reference is made to the RFP documents and provisions of the EDA Grant.

Project Understanding

The City of Kingston needs an expert Consulting Engineering Team to provide services for survey, design and construction administration of three related project components:

- Stabilization of the Tannery Shaft Tunnel
- Replacement of Tannery Brook Channel with stormwater conveyance piping
- Restoration of surfaces at Washington Avenue and Tannery Brook

Critical to the success of this project is the long term stability of the subsurface soils along the tunnel alignment and the need to prevent continued subsidence. That is why GEA has brought in national experts in solving geotechnical and tunnel problems, the renowned firm of Mueser Rutledge Consulting Engineers (MRCE). While emergency engineering services have been initiated to address the problems, only experts with the breadth of experience of Mueser Rutledge can provide the level of comfort needed to protect the health and safety of Kingston's citizens.

1.0 TUNNEL INVESTIGATION AND REPAIR

Performance problems associated with a 100 year old brick arch tunnel below Washington Avenue in the city of Kingston, NY, will be separated into two related areas of concern. First, deterioration of the brick arch tunnel has allowed sediment laden groundwater to enter. Second, ground loss above the tunnel caused subsidence of the overburden and created sinkholes at the surface, damaging buried utilities and rendering Washington Avenue unsafe for traffic.

MRCE will conduct a thorough review of available subsurface and construction history information, and conduct a subsurface investigation to augment the available information (if needed) in order to efficiently define those areas in need of remedial work. MRCE will develop and present several alternatives for permanent remedy of the performance problems.

MRCE will prepare a cost estimate for each alternative and assess the performance and safety risks. Cost estimates will be developed by speaking to contractors for specialty items such as jet grouting and chemical grouting.

MRCE will consider methods for real-time monitoring of the existing tunnel during remedial construction in order to detect and manage construction disturbance.

Based on our understanding of the tunnel and performance problems, permanent remedy alternatives may include a combination of the following:

1. Dewatering

- Control groundwater infiltration to the tunnel by dewatering to reduce hydrostatic pressure. Dewatering can be used for temporary benefit during tunnel repair work or grouting.
- Determine feasibility of permanent dewatering to inhibit ground loss and reduce loads on the tunnel brick arch or insert liners.

2. Jet Grout Arch

- Use jet grouting method to create a monolithic structural soil-cement block above the tunnel to close flow pathways for groundwater and sediment, and transfer overburden soil load away from the brick arch liner.
- Extend jet grout columns vertically adjacent to the tunnel to transfer overburden load below the invert and seal against lateral groundwater flow.
- Potential to offer a lower, cost effective solution compared to the current plan being considered; \$300,000 verses \$600,000.

3. Grout Seal Shaft Penetration

Use chemical or pressure grouting methods to seal shaft penetration at the bedrock surface and at the top of the brick arch structure.

4. Replace Tunnel Segment

Construct a braced excavation to remove and replace the damaged segment of tunnel and shaft with new structures.

5. Overburden Densification

- Implement compaction grouting where borings or cone penetrometers identify interconnected voids or loosened soil pockets.
- Utilize vibrating pile densification to remedy large areas of loose soil.

6. Reinforced Subgrade

Construct a reinforced soil or reinforced concrete mat below Washington Avenue subgrade to reduce potential for surface effects caused by unidentified voids or loose soil zones in the deep soil profile.

Remedy Design

1. Provide detailed design for selected permanent remedy approach, including design drawings, specifications, construction sequence and cost estimate.
2. Design an instrumentation and monitoring plan to detect possible disturbance to the existing tunnel during constructions. Develop vibration action levels and notification plan to modify construction activities in a timely manner.

Remedy Inspection

1. Provide field inspection of selected permanent remedy work.
2. Implement the monitoring and notification plan during construction.
3. Provide design drawings and specifications for reconstruction of near-surface subgrade to reduce the potential for continued ground surface subsidence.

2.0 STORMWATER CONVEYANCE PIPING OF TANNERY BROOK

GEA proposes to utilize the following software to conduct the hydrologic and hydraulic analyses and produce the required models and plans.

- Drainage analysis – HydroCad (TR-55, TR-20) watershed modeling to provide NYSDEC accepted hydrology, and HEC-RAS to provide the hydraulic modeling to demonstrate reduction of flooding. The 25 yr, 50 yr and 100 yr design storms will be modeled. GEA will generate the runoff of stormwater from the tributary area of Tannery Brook.

- AutoCAD Civil 3-D – AutoCAD Civil 3-D will be utilized to produce the design drawings, plans, profiles and sections and designs.

Surveys

GEA will engage Brooks & Brooks (WBE) surveyors to provide the surveying for the project.

1. Topographic and physical features survey areas approximately 400' x 400' at Washington Avenue and Donovan Place (area of depression).

Include:

- Top and bottom of curb on Washington Avenue
- Sidewalks in front of houses
- Driveways in front of houses
- Poles, hydraulics, signs in ROW
- Culvert
- Manholes and chamber covers
- Water and sewer lines

2. Topographic surveys along Tannery Brook (850 LF±) including culverts from Washington Avenue to Conway Place to 50 ft behind garage. Distance of 850 LF±. Include top and bottom of curb and street elevations. Sections 40 ft± width of survey = 40 ft. Shoot: channel thailweg, top of bank and bottom of bank (L&R). Locate trees and structures within 40' ROW.

3. Prepare easements 15-20ft width for item 2 and five properties for item 1.

4. Establish baseline control with benchmarks.

Watershed Map

GEA will delineate the project watershed map based on all available topographic and site information including the records searches from the various agencies. This watershed map will be initially developed using Ulster County topography supplemented by local available elevation data from GEA's survey, available maps and drawings and will be presented on a 24" x 36" drawing.

Hydrologic Study

The 25 year, 50 year and 100 year Tannery Brook flows will be estimated. GEA will run the HydroCad model to provide flows for design storms from the watershed.

GEA will run the HEC-RAS models using various pipe diameters starting with 4 ft dia. and increasing in diameter and flow area, considering the need for arch pipe to maintain depth of cover and profile. The HEC-RAS model will indicate water surface elevations contained within the system for different storm flow events and pipe diameters.

Kingston officials will select the size of pipe needed based on estimated costs provided, budget and projected flooding reduction.

3.0 RESTORATION OF SURFACES

GEA will survey affected areas along with Brooks & Brooks, and assess the repairs needed for restoration. These will include: repairs to driveways, curbs, sidewalks, stairs and other areas subjected to subsidence.

Engineering Plans

GEA will prepare detailed construction plans for the proposed work. The plans will be prepared on 24" x 36" sheets. The work will generally be presented in the order, manner and detail specified by the City and EDA.

Each item of work on the plans shall be identified with item number corresponding to those in the Standard Specification based on NYSDOT specifications. Special specifications shall be provided for all work items not covered by the Standard Specifications. GEA will provide a computer generated list of bid items with item numbers and estimated quantities. The list will be generated with Microsoft Excel and a CD disk containing this data shall be provided.

EXHIBIT 1

FEE PROPOSAL

GEA ENGINEERING, P.C. in Association with Mueser Rutledge Consulting Engineers
ENGINEERING SERVICES - WASHINGTON AVE. TUNNEL APPURTENANCES
CITY OF KINGSTON
PROFESSIONAL SERVICES COST ESTIMATE

OEA ENGINEERING P.C.	TUNNEL INVESTIGATION AND REPAIR DESIGN										DESIGN OF SURFACE NEAR TUNNEL SHAFT (WASH. AVE.)										OEA ENGINEERING P.C.										
	Task 1a					Task 1b					Task 2					Task 3					Task 4					Task 5					
	Rate	Hours	Days	Weeks	Months	Rate	Hours	Days	Weeks	Months	Rate	Hours	Days	Weeks	Months	Rate	Hours	Days	Weeks	Months	Rate	Hours	Days	Weeks	Months	Rate	Hours	Days	Weeks	Months	
PRINCIPAL ENGINEER	138	1	188	1	188	0	0	0	0	0	1129	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
S. PROJECT ENGINEERS	95	2	190	2	190	0	0	0	0	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SENIOR ENGINEERS	75	2	150	2	150	0	0	0	0	0	436	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ENGINEER	65	2	130	2	130	0	0	0	0	0	395	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TECHNICAL SUPPORT	55	2	110	2	110	0	0	0	0	0	360	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SUB-TOTAL LABOR		8	378	1	378	0	0	0	0	0	1888	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
OEA ENGINEERING																															
DESIGN																															
CONSTRUCTION																															
TRAVEL																															
SUB-TOTAL EXPENSES																															
MUESER RUTLEDGE																															
DESIGN																															
CONSTRUCTION																															
TRAVEL																															
SUB-TOTAL EXPENSES																															
GRAND TOTAL																															

CONTINGENCY ITEMS FOR TUNNEL INVESTIGATIONS AND REPAIR
12,500 EST.
- ADD ASSESSMENT, IF NEEDED
- SURFACE INVESTIGATIONS, IF NEEDED

**THE GEA GROUP
GEA ENGINEERING P.C.
GEA ENVIRONMENTAL CONSULTANTS, INC.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS
100 AIRPORT EXECUTIVE PARK, SUITE 105
NANUET, NEW YORK 10954**

Web: geaengineering.com
(845) 371-5522

STEVEN M. GAMELSKY, P.E.
PRESIDENT

FAX: (845) 371-5526

**GEA FEE SCHEDULE
CIVIL ENGINEERING**

(Effective April 17, 2013 through December 31, 2013)

<u>PERSONNEL</u>	<u>HOURLY RATE</u>
Principal Engineer/Project Manager	\$188.00
Senior Project Engineer	\$ 95.00
Project Engineer/Scientist	\$ 85.00
Staff Engineer II	\$ 70.00
Staff Engineer I	\$ 65.00
Senior AutoCad Designer	\$ 70.00
AutoCad Drafter	\$ 50.00
Technician/Inspector	\$ 50.00
Technical Systems Support	\$ 60.00

The above billing rates include direct salary, overhead, general and administrative expenses and profit. Other direct expenses, i.e., travel, lodging, reproduction, plotting, engineering supplies and rentals, telephone, freight, etc. are billed at cost plus 20 per cent. GEA uses and complies with Standard IRS and government rates for travel and lodging.

Fees for expert testimony and appearances , add 50%.

GEA ENGINEERING, P.C.
100 Airport Executive Park, Ste. 105
Nanuet, NY 10954

Tel: (845) 371-5522
Fax: (845) 371-5526

April 30, 2013

FEE SCHEDULES

<u>CLASSIFICATION</u>	<u>1/1/13-12/31/13</u>	<u>1/1/14-12/31/14</u>	<u>1/1/15-12/31/15</u>
Principal Engineer/Project Manager	188	197	206
Senior Project Engineer	95	100	105
Project Engineer/Scientist	85	90	95
Staff Engineer II	70	75	80
Staff Engineer I	65	70	75
Senior AutoCad Designer	70	75	80
AutoCad Drafter	50	53	55
Technician/Inspector	50	53	55
Technical Systems Support	60	63	66

MUESER RUTLEDGE CONSULTING ENGINEERS

225 West 34th Street - 14 Penn Plaza
New York, NY 10122

Office 917-339-9300
Fax 917-339-9400

4/29/2013

PAY RATES

<u>CLASSIFICATION</u>	<u>7/1/2012 - 6/30/2013</u>	<u>7/1/2013 - 6/30/2014</u>	<u>7/1/2014 - 6/30/2015</u>
PARTNERS	310	319	329
SENIOR ASSOCIATES	289	298	307
ENGINEERS V	170	175	180
ENGINEERS IV	154	159	164
ENGINEERS II	120	124	128
DRAFTING	110	113	116